AMENDMENTS TO CLAIMS

Claims 1-13 (Cancelled)

14. (Currently amended) The information storage device of claim 18 [13], wherein each first magnetic tunnel junction includes a first sense layer and a first pinned layer; and wherein each second magnetic tunnel junction includes a second sense layer and a second pinned layer.

15. (Currently amended) The information storage device of claim [13] 18, wherein the sense layers of the series-connected junctions are connected in series; and wherein the series-connected sense layers are separated by a layer of non-magnetic material.

16. (Currently amended) ~~The information storage device of claim 13,~~ An information storage device comprising:

an array of memory cells; and

a plurality of first and second traces for the array, the first and second traces extending in different directions;

each memory cell being at a cross point of a first trace and a second trace;

at least some of the memory cells including series-connected first and second magnetic tunnel junctions, sense layers of the first and second junctions having different coercivities, ~~wherein~~ the series-connected magnetic tunnel junctions [have] having shared pinned layers.

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17. (Currently amended) The information storage device of claim [13] 18, wherein hysteresis loops of series-connected junctions are nested.

18. (Currently amended) [The] An information storage device comprising: ~~of claim 13,~~

an array of memory cells; and

a plurality of first and second traces for the array, the first and second traces extending in different directions;

each memory cell being at a cross point of a first trace and a second trace;

at least some of the memory cells including series-connected first and second magnetic tunnel junctions, sense layers of the first and second junctions having different coercivities and ~~wherein the sense layers in the series-connected first and second junctions have~~ different shapes.

19. (Currently amended) The information storage device of claim [13] 18, wherein the sense layers in the series-connected first and second junctions have different sizes.

20. (Currently amended) The information storage device of claim [13] 18, wherein the sense layers of the series-connected first and second junctions have different thicknesses.

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21. (Currently amended) [The] An information storage device comprising: ~~of claim 13,~~

an array of memory cells; and

a plurality of first and second traces for the array, the first and second traces extending in different directions;

each memory cell being at a cross point of a first trace and a second trace;

at least some of the memory cells including series-connected first and second magnetic tunnel junctions, sense layers of the first and second junctions having different coercivities, ~~wherein~~ the sense layers of the series-connected first and second junctions [are] made of different materials.

22. (Currently amended) The information storage device of claim [13] 18, wherein the series-connected first and second junctions have distinguishably different delta resistances, whereby each memory cell having series-connected junctions has at least four distinguishable logic states.

Claims 23-25 (Cancelled)

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